

CLAIM AMENDMENTS

1. (currently amended) A cell culture chamber [(20)] for a closed cell culture system serving to continuously supply different cells with liquid nutrient media, growth factors, and gases ~~and the like, characterized by the fact that~~ the cell culture chamber (20) ~~is materially composed of the following components comprising:~~

[[a)] a membrane plate [(1)] with a membrane [(2)] serving to accommodate at least one cell culture and equipped with a number of channels passages (4, 4', 4'', 4''') for supplying liquid, gassing and sensor connection;

[[b)] a first transparent glass pane [(3)] which is placed on one side of the membrane plate (1) ~~while provided;~~

means on the one side for observing the inside of the cell culture chamber [(20)] from the side mentioned above;

[[and]]

[[c)] a cover plate [(5)] which is placed on the opposite side of the membrane plate [(1)] and which is provided with an incorporated, second transparent glass pane [(6)]; and
means on the opposite side for illuminating the inside of the cell culture chamber [(20)] from this opposite side through the second pane ~~with the aid of an assigned lighting system.~~

2. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the first transparent glass pane [(3)] is fixed on the membrane plate [(1)] in the area of the underside of the membrane plate [(1)] for the purpose of observing the inside of the cell culture chamber [(20)].

3. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the cover plate [(5)] forms a cell culture chamber cap with a ~~securely integrated~~ the second transparent glass pane [(6)], such cell culture chamber cap being fixed in a releasable manner on the upper side of the membrane plate [(1)].

4. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the cell culture chamber cap [(5)] as well as the underside of the membrane plate ~~(1)~~ show are formed with an opening for the accommodation and fixation of the respective glass panes ~~(6 resp. 3)~~.

5. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the glass panes ~~(6, 3)~~ is a are sapphire glass panes.

6. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising~~, for the fixation of the membrane $[(2)]$ on the membrane plate $[(1),]$:

a retaining ring ~~(7) is provided, which that~~ can, with the aid of the cell culture chamber cap $[(5)]$, be pressed on the periphery of the membrane $[(2)]$ so that the latter can be fixed.

7. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising~~, on the side of the cell culture chamber cap $[(5)]$ facing the membrane plate $[(1),]$:

a joint ring ~~(8) is provided, by which that aseptically closes~~ the cell culture prepared on the membrane ~~(2) is aseptically closed~~ when the cell culture chamber $[(20)]$ is closed.

8. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising~~

means for supplying a constant, continuous gassing is ~~enabled by means of~~ via a suitable compartmentalization of the cell culture chamber $[(20)]$ via the respectively assigned channels passages ~~(4', 4''')~~ with freely selectable concentrations of the most various gases.

9. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising, for fixing~~ the membrane plate (1) ~~can be fixed~~ at its side opposite the cell culture chamber cap, (5) on an assigned retainer plate [(10)] for integration in the cell culture system, this retaining plate [(10)] being equipped with an integrated heating heater for the cell culture chamber [(20)].

10. (currently amended) The cell culture chamber according to claim 9, ~~characterized by the fact that wherein~~ the heating heater is an electrical heating heater.

11. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that wherein~~ the membrane [(2)] is a gas-permeable biofoil.